

**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OPERATING PERMIT TECHNICAL REVIEW DOCUMENT**

**Permitting and Compliance Division
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**Northern Border Pipeline Company
Compressor Station No. 3
NE¼ of the NE¼, of Section 6, Township 28 North, Range 57 East
Roosevelt County, Montana**

The following table summarizes the air quality programs testing, monitoring, and reporting requirements applicable to this facility.

Facility Compliance Requirements	Yes	No	Comments
Source Tests Required	X		Portable analyzer
Ambient Monitoring Required		X	
COMS Required		X	
CEMS Required		X	
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		
Monthly Reporting Required		X	
Quarterly Reporting Required		X	
Applicable Air Quality Programs			
ARM Subchapter 7 Preconstruction Permitting	X		#2974-01
New Source Performance Standards (NSPS)	X		Subpart GG
National Emission Standards for Hazardous Air Pollutants (NESHAPS)		X	
Maximum Achievable Control Technology (MACT)		X	
Major New Source Review (NSR)		X	
Prevention of Significant Deterioration (PSD)		X	
Risk Management Plan Required (RMP)		X	
Acid Rain Title IV		X	
State Implementation Plan (SIP)	X		General SIP

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SECTION I. GENERAL INFORMATION

A. Purpose

This document establishes the basis for the decisions made regarding the applicable requirements, monitoring plan, and compliance status of emissions units affected by the Operating Permit proposed for this facility. The document is intended for reference during review of the proposed permit by the Environmental Protection Agency (EPA) and the public. It is also intended to provide background information not included in the Operating Permit and to document issues that may become important during modifications or renewals of the permit. Conclusions in this document are based on information provided in the renewal application submitted by Northern Border Pipeline Company (NBPL) on March 11, 2003.

B. Facility Location

NBPL owns and operates the Compressor Station No. 3. This facility is located in the NE¼ of the NE¼ of Section 6, Township 28 North, Range 57 East, in Roosevelt County, Montana. This site is approximately 4 miles north of Culbertson, Montana. Compressor Station No.3 is located at an existing microwave station. The total property area covered by this facility is 20 acres. Roosevelt County is designated as an Unclassifiable/Attainment area for National Ambient Air Quality Standards (NAAQS) for all criteria pollutants.

C. Facility Background Information

Permit #2974-00 established the basis for the decisions made regarding the applicable requirements, monitoring plan, and compliance status of emissions units affected by the Operating Permit proposed for this facility. The document was intended for reference during review of the proposed permit by the EPA and the public. It was also intended to provide background information not included in the Operating Permit and to document issues that may become important during modifications or renewals of the Operating Permit. Conclusions in this document were based on information provided in the original Operating Permit application submitted by NBPL and received by the Department on December 23, 1996.

On February 21, 2001, the Montana Department of Environmental Quality (Department) received a request from NBPL for a revision of Permit #2974-00 to alter the custom fuel monitoring schedule and equipment for Compressor Station 3 located in Roosevelt County, Montana. The chromatograph was replaced with an hydrogen sulfide (H₂S) and Total Sulfur Analyzer and the custom fuel schedule was structured to allow a representative sample to be recorded every 2 weeks with an option of extending the sampling schedule to once every six months as approved by the Department. Permit #2974-01 replaced Permit #2974-00.

On October 9, 2001, the Department received a request from NBPL for a modification to Operating Permit OP2974-01. The modification was an administrative amendment, which changed the responsible official for the facility. Operating Permit **OP2974-02** replaced Operating Permit OP2974-01.

On February 3, 2003, the Department received a request from NBPL for a modification to Operating Permit OP2974-02. The modification was an administrative amendment, which changed the responsible official and the corporate office address for the facility. Operating Permit **OP2974-03** replaced Operating Permit OP2974-02.

On February 3, 2003, the Department received a request from NBPL for a modification to Permit OP2974-03. The modification is an administrative amendment. The responsible officials name was changed in error on Operating Permit OP2974-03. Operating Permit OP2974-04 changed the

responsible official from Jay Muschenheim back to Randy Rice and changed the facility contact from Ruth Jensen to Jay Muschenheim. Operating Permit **OP2974-04** replaced Operating Permit OP2974-03.

D. Current Permit Action

On October 17, 2003, the Department received a request from Bear Paw for an administrative amendment of OP2736-02 to update Section V.B.3 of the General Conditions incorporating changes to federal Title V rules 40 CFR 70.6(c)(5)(iii)(B) and 70.6(c)(5)(iii)(C) (to be incorporated into Montana's Title V rules at ARM 17.8.1213) regarding Title V annual compliance certifications. Operating Permit **OP2974-05** replaces Operating Permit OP2974-04.

E. Taking and Damaging Analysis

HB 311, the Montana Private Property Assessment Act, requires analysis of every proposed state agency administrative rule, policy, permit condition or permit denial, pertaining to an environmental matter, to determine whether the state action constitutes a taking or damaging of private real property that requires compensation under the Montana or U.S. Constitution. As part of issuing an Operating Permit, the Department is required to complete a Taking and Damaging Checklist. As required by 2-10-101 through 105, MCA, the Department has conducted a private property taking and damaging assessment and has determined there are no taking or damaging implications. The checklist was completed on October 20, 2003.

F. Compliance Designation

The facility was inspected July 22, 2003, with the results of the inspection and all the material reviewed in the Department's files indicates that the facility is in compliance with all the applicable requirements. All source tests shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual.

SECTION II. SUMMARY OF EMISSION UNITS

A. Facility Process Description

The NBPL Compressor Station No. 3 is a natural gas pipeline transmission station with one Cooper-Rolls Coberra, natural gas fired turbine. A hot water boiler provides the heat to the various station facilities.

The Standard Industrial Classification (SIC) for this facility is "Natural Gas Transmission" which has an SIC Code of 4922.

B. Emission Units and Pollution Control Device Identification

The NBPL Compressor Station No. 3 application identified one 40,350 hp Cooper-Rolls Coberra 6562 Compressor Turbine, one 245 kW emergency backup generator engine, one 1.706 MMBtu/hr hydronic boiler, and one 15 kW emergency backup generator.

The Cooper-Rolls Coberra will contain a dry low NO_x combustion system, as part of the turbine design, this design and operating practice constitutes BACT for this facility. No pollution control devices exist on the two emergency backup generator engines or the hydronic boiler.

C. Categorically Insignificant Sources/Activities

The Administrative Rules of Montana ((ARM) 17.8.120 (22)(a)) defines an insignificant emissions unit as one that emits less than 5 tons per year of any regulated pollutant, has the potential to emit less than 500 pounds per year of lead or any hazardous air pollutant, and is not regulated by an applicable requirement other than a generally applicable requirement.

This facility has a 1.706 MMBtu/hr Hydronic Boiler, used for heating buildings and fuel preheat as needed. This boiler meets the definition of insignificant emissions unit.

SECTION III. PERMIT CONDITIONS

A. Emission Limits and Standards

Emission limits for the 40,350 hp Cooper-Rolls Coberra Compressor Turbine were established by a BACT determination under the authority of ARM 17.8.715. The compressor turbine has an emission limit of 40 ppmvd and 50.0 lb/hr for NO_x and 3.00 lb/hr for VOC. Sulfur content in the fuel shall not exceed 0.08% by weight and sulfur dioxide content in the fuel shall not exceed 0.015% by volume at 15% oxygen on a dry basis. The two emergency generator engines are limited to 500 hours of operation per year in order to comply with the EPA definition of an "emergency back up generator".

NBPL shall comply with all applicable standards, limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR Part 60, Subpart GG unless otherwise specified (ARM 17.8.340 and 40 CFR Part 60).

The emissions units at this facility are not subject to any current MACT or NESHAP standards. This facility is not subject to PSD regulations.

B. Monitoring Requirements

ARM 17.8.1212(1) requires that all monitoring and analysis procedures or test methods required under applicable requirements are contained in Operating Permits. In addition, when the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit.

The requirements for testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance does not require the permit to impose the same level of rigor for all emissions units. Furthermore, it does not require extensive testing or monitoring to assure compliance with the applicable requirements for emissions units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. When compliance with the underlying applicable requirement for a insignificant emissions unit is not threatened by lack of regular monitoring and when periodic testing or monitoring is not otherwise required by the applicable requirement, the status quo (**i.e., no monitoring**) will meet the requirements of ARM 17.8.1212(1). Therefore, the permit does not include monitoring for insignificant emission units.

The permit includes periodic monitoring or recordkeeping for each applicable requirement. The information obtained from the monitoring and recordkeeping will be used by the permittee to periodically certify compliance with the emission limits and standards. However, the Department may request additional testing to determine compliance with the emission limits and standards.

C. Test Methods and Procedures

NBPL shall conduct an emissions test with a portable analyzer in order to determine the NO_x emissions from the turbine once every six months. The portable analyzer shall be capable of achieving performance specifications equivalent to EPA traditional methods defined in 40 CFR 60, Appendix A or shall be capable of meeting the requirements of EPA Conditional Test Method 022 for the "Determination of Nitric Oxide, Nitrogen Dioxide, and NO_x Emissions from Stationary Combustion Sources by Electrochemical Analyzer." NBPL shall demonstrate compliance with the NO_x limitations by converting the emission test results (ppm) to a mass

emission rate (lb/hr) using EPA Method 19 in 40 CFR 60, Appendix A. NBPL may use another testing procedure as approved in advance by the Department (ARM 17.8.105 and ARM 17.8.106).

D. Recordkeeping Requirements

The permittee is required to keep all records listed in the Operating Permit as a permanent business record for at least 5 years following the date of the generation of the record.

E. Reporting Requirements

Reporting requirements are included in the permit for each emissions unit and Section V of the Operating Permit "General Conditions" explains the reporting requirements. However, the permittee is required to submit semiannual and annual monitoring reports to the Department and to annually certify compliance with the applicable requirements contained in the permit. The reports must include a list of all emission limit and monitoring deviations, the reason for any deviation, and the corrective action taken as a result of any deviation.

SECTION IV. NON-APPLICABLE REQUIREMENT ANALYSIS

Section IV of the Operating Permit "Non-applicable Requirements" contains the requirements that the Department determined were non-applicable. The following table summarizes the requirements that NBPL identified as non-applicable and contains the reasons that the Department did not include these requirements as non-applicable in the permit.

Requirements Not Identified in the Operating Permit

Applicable Requirement		Reason	
Subchapter 1 General Provisions			
ARM 17.8.101 ARM 17.8.102 ARM 17.8.103	Definitions Incorporation by Reference - Publication Dates and Availability of Referenced Documents Incorporation by Reference	These rules consist of either a statement of purpose, applicability statement, regulatory definitions or a statement of incorporation by reference. These types of rules do not have specific requirements associated with them.	
Subchapter 2 Ambient Air Quality			
ARM 17.8.201 ARM 17.8.202	Definitions Incorporation by Reference		These rules are always applicable to a major source and may contain specific requirements for compliance. However, these rules have been excluded as an applicable requirement (ARM 17.8.1202).
ARM 17.8.205 ARM 17.8.206 ARM 17.8.210 ARM 17.8.211 ARM 17.8.212 ARM 17.8.213 ARM 17.8.214 ARM 17.8.220 ARM 17.8.221 ARM 17.8.222 ARM 17.8.223 ARM 17.8.230	Enforceability Methods and Data Ambient Air Quality Standard for Sulfur Dioxide Ambient Air Quality Standard for Nitrogen Dioxide Ambient Air Quality Standard for Carbon Monoxide Ambient Air Quality Standard for Ozone Ambient Air Quality Standard for Hydrogen Sulfide Ambient Air Quality Standard for Settled Particulate Matter Ambient Air Quality Standard for Visibility Ambient Air Quality Standard for Lead Ambient Air Quality Standard for PM ₁₀ Fluoride in Forage		
Subchapter 3 Emission Standards			
ARM 17.8.326	Prohibited Materials for Wood or Coal Residential Stoves	This regulation may not be applicable to the source at this time; however, it may become applicable during the life of the permit.	
ARM 17.8.330	Definitions	This rule consists of either a statement of purpose, applicability statement, regulatory definition or a statement of incorporation by reference. These types of rules do not have specific requirements associated with them.	

Applicable Requirement		Reason
Subchapter 4 Stack Heights		
ARM 17.8.401	Definitions	This rule consists of either a statement of purpose, applicability statement, regulatory definition or a statement of incorporation by reference. These types of rules do not have specific requirements associated with them.
ARM 17.8.402 ARM 17.8.403	Requirements Exemptions	These are procedural rules that have specific requirements that may become relevant to a major source during the permit span.
Subchapter 5 Air Quality Permit Application, Operation and Open Burning Fees		
ARM 17.8.504 ARM 17.8.514 ARM 17.8.515	Air Quality Permit Application Fees Air Quality Open Burning Fees Air Quality Open Burning Fees for Conditional, Emergency, Christmas Tree Waste, and Commercial Film Production Open Burning Permits	These are procedural rules that have specific requirements that may become relevant to a major source during the permit span
Subchapter 6 Open Burning		
ARM 17.8.606 ARM 17.8.611 ARM 17.8.612	Minor Open Burning Requirements Emergency Open Burning Permits Conditional Air Quality Open Burning Permits	The following regulations may not be applicable to the source at this time, however, these regulations may become applicable during the life of the permit.
Subchapter 7 Permit, Construction and Operation of Air Contaminant Sources		
ARM 17.8.740 <i>et seq.</i>	Permit, construction and operation of air contaminant sources	The following regulations may not be applicable to the source at this time; however, these regulations may become applicable during the life of the permit.
Subchapter 8 Prevention of Significant Deterioration		
ARM 17.8.825 ARM 17.8.826	Sources Impacting Federal Class I Areas -Additional Requirements Public Participation	These rules do not have specific requirements for major sources because they are requirements for EPA or state and local authorities. Furthermore, these rules can be used as authority to impose specific requirements on a major source.
ARM 17.8.804	Ambient Air Increments	The following regulations may not be applicable to the source at this time, however, these regulations may become applicable during the life of the permit
Subchapter 9 Permit Requirements for Major Stationary Sources or Major Modifications Located Within Nonattainment Areas		
ARM 17.8.901 ARM 17.8.902	Definitions Incorporation by Reference	These rules consist of either a statement of purpose, applicability statement, regulatory definitions or a statement of incorporation by reference. These types of rules do not have specific requirements associated with them.
ARM 17.8.904	When Air Quality Preconstruction Permit Required	These regulations are state regulations, which may not be applicable to the source at this time;

Applicable Requirement		Reason
ARM 17.8.905 ARM 17.8.906	Additional Conditions of Air Quality Preconstruction Permit Baseline for Determining Credit for Emissions and Air Quality Offsets	however, these regulations may become applicable during the life of the permit.
Subchapter 10 Preconstruction Permit Requirements for Major Stationary Sources or Major Modifications Located Within Attainment or Unclassified Areas		
ARM 17.8.1001 ARM 17.8.1002	Definitions Incorporation by Reference	These rules consist of either a statement of purpose, applicability statement, regulatory definitions or a statement of incorporation by reference. These types of rules do not have specific requirements associated with them.
ARM 17.8.1004 ARM 17.8.1005 ARM 17.8.1006 ARM 17.8.1007	When Air Quality Preconstruction Permit Required Additional Conditions of Air Quality Preconstruction Permit Review of Specified Sources for Air Quality Impact Baseline for Determining Credit for Emissions and Air Quality Offsets	These regulations may not be applicable to the source at this time, however, these regulations may become applicable during the life of the permit.
Subchapter 11 Visibility Impact Assessment		
ARM 17.8.1101 ARM 17.8.1103	Definitions Applicability --Visibility Requirements	These rules consist of either a statement of purpose, applicability statement, regulatory definitions or a statement of incorporation by reference. These types of rules do not have specific requirements associated with them.
ARM 17.8.1108 ARM 17.8.1109	Notification of Permit Application Adverse Impact and Federal Land Management	These rules do not have specific requirements for major sources because they are requirements for EPA or state and local authorities. Furthermore, these rules can be used as authority to impose specific requirements on a major source.
Federal Requirements		
40 CFR 50 National Primary and Secondary Ambient Air Quality Standards 40 CFR 51 Requirements for Preparation, Adoption, and Submittal of Implementation Plans 40 CFR 58 Ambient Air Quality Surveillance		These rules do not have specific requirements for major sources because they are requirements for EPA or state and local authorities. Furthermore, these rules can be used as authority to impose specific requirements on a major source
40 CFR 52 Approval and Promulgation of Implementation Plans 40 CFR 62 Approval and Promulgation of State Plans for Designated Facilities and Pollutants 40 CFR 70 and 71 State Operating Permit Programs and EPA Regulations on Federal Operating Permit Programs		These rules contain requirements for regulatory authorities and not major sources; these rules can be used to impose specific requirements on a major source.
40 CFR 60.11 Compliance with Standards and Maintenance Requirements 40 CFR 60.14 Modification 40 CFR 60.15 Reconstruction		These regulations may not be applicable to the source at this time; however, these regulations may become applicable during the life of the permit.
40 CFR 61, Subpart M National Emissions Standards for Hazardous Air Pollutants - Asbestos		This is a federal regulation that has specific procedural requirements that may become relevant to the major source during the permit

Applicable Requirement	Reason
	term.
40 CFR 63, Subpart A General Provisions	These federal regulations consist of an applicability statement. These regulations may not be applicable to the source at this time; however, these regulations may become applicable during the life of the permit.

SECTION V. FUTURE PERMIT CONSIDERATIONS

A. MACT Standards

As of the Date of Decision for OP2974-05, the Department is unaware of any future MACT Standards that may be promulgated that will affect this facility.

B. NESHAP Standards

National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities (40 CFR Part 63 Subpart HH) and National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities (40 CFR Part 63 Subpart HHH) was promulgated June 17, 1999. As of January 6, 2002 the Department has not made an applicability determination.

C. NSPS Standards

As of the Date of Decision for OP2974-05, this facility is subject to 40 CFR Part 60 Subpart GG, Standards of Performance for Stationary Gas Turbines.

D. Risk Management Plan

As of the Date of Decision for OP2974-05, this facility does not exceed the minimum threshold quantities for any regulated substance listed in 40 CFR 68.115 for any facility process. Consequently, this facility is not required to submit a Risk Management Plan.

If a facility has more than a threshold quantity of a regulated substance in a process, the facility must comply with 40 CFR 68 requirements no later than June 21, 1999; three years after the date on which a regulated substance is first listed under 40 CFR 68.130; or the date on which a regulated substance is first present in more than a threshold quantity in a process, whichever is later.